

Abstract of the disclosure

A Stirling engine comprising a casing, a displacer arranged in the casing so as to slide, an expansion chamber and an operation chamber into which, and from which, an operation gas flows with the operation of the displacer, and a power piston that is operated in response to a change in the pressure of the operation gas in the operation chamber, wherein the Stirling engine further comprises a displacer operation means having a moving yoke disposed in the displacer and a pair of electromagnetic solenoids disposed to surround the moving yoke and juxtaposed to each other in the axial direction in the casing; a power piston position detection means for detecting the operation position of the power piston; and a control means for controlling to switch over the excitation of the pair of electromagnetic solenoids of the displacer operation means based on a detection signal from the power piston position detection means.